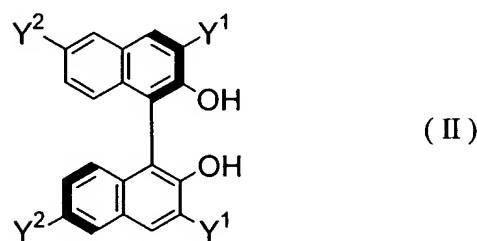


Abstract

An intramolecular [3+2] cycloaddition reaction of a hydrazone is carried out under a mild condition with a high stereoselectivity and yield by reacting a hydrazone derivative in the presence of an asymmetric catalyst system obtained by mixing a zirconium alkoxide represented by the following formula (I):



(wherein R is a hydrocarbon group which may have a substituent) with a binaphthol derivative represented by the following formula (II):



(wherein Y¹ and Y² are each identical or different and denote a hydrogen atom or a halogen atom, and at least one of Y¹ and Y² denotes a halogen atom).